WHAT IS CLAIMED IS:

1. A system for passively controlling pressure oscillations of hydrodynamic origin in a solid propellant thruster comprising a body containing a charge of solid propellant, the system comprising at least one insert disposed in said thruster body transversely relative to a combustion gas flow channel formed in the solid propellant charge, said insert including a single opening of non-axisymmetric shape that is different from the shape of the gas flow channel so as to generate a three-dimensional effect on the flow in order to prevent axisymmetric turbulent modes from forming in the thruster.

2. A system according to claim 1, wherein said non-axisymmetric opening of the insert is present in the flow channel throughout the duration of the combustion of the solid propellant charge.

3. A system according to claim 2, wherein the insert is made of a "rigidimer" composite material.

4. A system according to claim 1, wherein said non-axisymmetric opening of the insert appears in the flow channel from a predetermined instant of the combustion of the solid propellant charge.

5. A system according to claim 4, wherein the insert has an opening of shape that varies from a shape that is axisymmetric at the beginning of combustion to a shape that is not axisymmetric as from a predetermined instant of combustion.

6. A system according to claim 5, wherein the insert of varying shape comprises a first portion constituted by a first material and a second portion constituted by a second material and occupying part of the non-axisymmetric opening of the insert, said second material having a speed of ablation that is faster than that of the first material.

7. A system according to claim 5, wherein the insert of varying shape comprises a first portion and a second portion occupying part

of the non-axisymmetric opening of the insert, said second portion being weaker than said first portion.

8. A system according to claim 6, wherein said insert is made of an elastomer composite material or of a composite material comprising both elastomer and "rigidimer".

9. A system according to claim 4, wherein a portion of the propellant charge placed upstream from the insert having a non-axisymmetric opening presents a flow channel with an initial diameter that is inscribed within the non-axisymmetric opening of said insert.

10. A system according to claim 1, wherein the thruster body contains a single block of solid propellant, the insert with a non-axisymmetric opening being disposed within said block.

11. A system according to claim 1, wherein the thruster body contains a propellant charge that is segmented into a plurality of blocks, and the insert having a non-axisymmetric opening is disposed in the inter-segment space that exists between two successive blocks.

12. A system according to claim 1, wherein the thruster body contains a propellant charge that is segmented into a plurality of blocks, with at least one of the blocks being inhibited, the insert having a non-axisymmetric opening being disposed on the top face of the inhibited block.

13. A system according to claim 1, wherein said opening of the insert is in the shape of a star.

14. A system according to claim 1, wherein said opening is in the shape of crenellations.

15. A method of controlling pressure oscillations of hydrodynamic origin in a solid propellant thruster, wherein a three-dimensional effect is generated on the flow to prevent axisymmetric turbulent modes forming, by placing an insert in the thruster transversely

relative to a combustion gas flow channel formed in the thruster, said insert having a single opening of non-axisymmetric shape that is different from the shape of the gas flow channel.

16. A method according to claim 15, wherein the three-dimensional effect on the flow is generated throughout the duration of the combustion of the solid propellant charge.

17. A method according to claim 15, wherein the three-dimensional effect on the flow is generated from a predetermined instant of the combustion of the solid propellant charge.

18. A method according to claim 17, wherein the three-dimensional effect on the flow is generated from a predetermined instant by means of an insert having an opening of shape that varies from an axisymmetric shape at the beginning of combustion to a non-axisymmetric shape at a predetermined instant of combustion.

19. A method according to claim 18, wherein the insert of varying shape comprises a first portion constituted by a first material and a second portion constituted by a second material and occupying part of the non-axisymmetric opening of the insert, said second material having a speed of ablation that is greater than that of the first material.

20. A method according to claim 18, wherein the insert of varying shape comprises a first portion and a second portion occupying part of the non-axisymmetric opening of the insert, said second portion being weaker than said first portion.

21. A method according to claim 17, wherein the three-dimensional effect on the flow is generated from a predetermined instant of the combustion by means of a portion of the propellant charge placed upstream from the insert having a non-axisymmetric opening and presenting a flow channel of an initial diameter that is inscribed in the non-axisymmetric opening of said insert.

22. A method according to claim 15, wherein the thruster body contains a single block of solid propellant, the insert having a non-axisymmetric opening being disposed inside the block.

23. A method according to claim 15, wherein the thruster body contains a propellant charge that is segmented into a plurality of blocks, the insert having a non-axisymmetric opening being disposed in the inter-segment space that exists between two successive blocks.

24. A method according to claim 15, wherein the thruster body contains a propellant charge that is segmented into a plurality of blocks including at least one block that is inhibited, the inset having a non-axisymmetric opening being disposed on the top face of the inhibited block.

25. A method according to claim 15, wherein said opening in the insert is in the shape of a star.

26. A method according to claim 15, wherein said opening in the insert is in the form of crenellations.